Claims

[c1] A method of determining whether a mobile phone is currently in a home network or a roaming network, the mobile phone including a SIM card resident thereon, the SIM card including an IMSI file, an OPL file, and a PNN file, each file having a record structure, the method comprising:
receiving, in the mobile phone, an over-the-air signal comprised of control data including public land mobile network (PLMN) data and location area information (LAI) data;
comparing the received PLMN data to PLMN data stored in the IMSI file on the SIM card, and if the received PLMN data matches the stored PLMN data, then determining that the current network is a home network; otherwise
checking whether the received LAI data is contained in the OPL file, and if not, then determining that the current network is a roaming network; otherwise
checking if the PNN record that the OPL record points to is the first record of the PNN file, and if it is, then determining that the current network is a home network; otherwise
determining that the current network is a roaming network.

[c2] The method of claim 1 wherein the networks are GSM networks.

[c3] The method of claim 2 further comprising establishing, upon a WAP session request, a digital CSD connection if the network is a home network.

[c4] The method of claim 2 further comprising establishing, upon a WAP session request, an analog CSD connection if the network is a roaming network.

[c5] The method of claim 2 further comprising providing an audible signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c6] The method of claim 2 further comprising providing a visual signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c7] A system for determining whether a mobile phone is currently in a home network or a roaming network, the mobile phone including a SIM card resident

thereon, the SIM card including an IMSI file, an OPL file, and a PNN file, each file having a record structure, the system comprising:
means for receiving, in the mobile phone, an over-the-air signal comprised of control data including public land mobile network (PLMN) data and location area information (LAI) data;
means for comparing the received PLMN data to PLMN data stored in the IMSI file on the SIM card, and if the received PLMN data matches the stored PLMN data, then determining that the current network is a home network; otherwise
means for checking whether the received LAI data is contained in the OPL file, and if not, then determining that the current network is a roaming network; otherwise
means for checking if the PNN record that the OPL record points to is the first record of the PNN file, and if it is, then determining that the current network is a home network; otherwise
determining that the current network is a roaming network.

[c8] The system of claim 7 wherein the networks are GSM networks.

[c9] The system of claim 8 further comprising means for establishing, upon a WAP session request, a digital CSD connection if the network is a home network.

[c10] The system of claim 8 further comprising means for establishing, upon a WAP session request, an analog CSD connection if the network is a roaming network.

[c11] The system of claim 8 further comprising indicator means for providing an audible signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c12] The system of claim 8 further comprising indicator means for providing a visual signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c13] A computer program product for determining whether a mobile phone is currently in a home network or a roaming network, the mobile phone including a SIM card resident thereon, the SIM card including an IMSI file, an OPL file, and a PNN file, each file having a record structure, the computer program product

comprising:

computer program code for receiving, in the mobile phone, an over-the-air signal comprised of control data including public land mobile network (PLMN) data and location area information (LAI) data;

computer program code for comparing the received PLMN data to PLMN data stored in the IMSI file on the SIM card, and if the received PLMN data matches the stored PLMN data, then determining that the current network is a home network; otherwise

computer program code for checking whether the received LAI data is contained in the OPL file, and if not, then determining that the current network is a roaming network; otherwise

computer program code for checking if the PNN record that the OPL record points to is the first record of the PNN file, and if it is, then determining that the current network is a home network; otherwise

determining that the current network is a roaming network.

[c14] The computer program product of claim 13 wherein the networks are GSM networks.

[c15] The computer program product of claim 14 further comprising computer program code for establishing, upon a WAP session request, a digital CSD connection if the network is a home network.

[c16] The computer program product of claim 14 further comprising computer program code for establishing, upon a WAP session request, an analog CSD connection if the network is a roaming network.

[c17] The computer program product of claim 14 further comprising computer program code for providing an audible signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c18] The computer program product of claim 14 further comprising computer program code for providing a visual signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone

is in the roaming network.

[c19] A mobile phone that can determine whether it is currently in a home network or a roaming network, the mobile phone comprising:
a SIM card including an IMSI file, an OPL file, and a PNN file, each file having a record structure; and
a processor coupled with said SIM card, the processor for:
receiving a signal comprised of control data including public land mobile network (PLMN) data and location area information (LAI) data;
comparing the received PLMN data to PLMN data stored in the IMSI file on the SIM card, and if the received PLMN data matches the stored PLMN data, then determining that the current network is a home network; otherwise
checking whether the received LAI data is contained in the OPL file, and if not, then determining that the current network is a roaming network; otherwise
checking if the PNN record that the OPL record points to is the first record of the PNN file, and if it is, then determining that the current network is a home network; otherwise
determining that the current network is a roaming network.

[c20] The mobile phone of claim 19 wherein the networks are GSM networks.

[c21] The mobile phone of claim 20 further comprising establishing, upon a WAP session request, a digital CSD connection if the network is a home network.

[c22] The mobile phone of claim 20 further comprising establishing, upon a WAP session request, an analog CSD connection if the network is a roaming network.

[c23] The mobile phone of claim 20 further comprising an indicator for providing an audible signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.

[c24] The mobile phone of claim 20 further comprising an indicator for providing a visual signal when the mobile phone is in a roaming network to indicate that roaming charges apply while the mobile phone is in the roaming network.